



The **ATLAS group** at the « Institut de Recherche des lois Fondamentales de l'Univers » (IRFU, Saclay) is seeking highly qualified and motivated individual for

A Postdoctoral research position (f/m)

to contribute to the upgrade program of the muon spectrometer of the ATLAS detector at the LHC. The successful candidate is expected to cover research areas such as:

- The analysis of the cosmic bench tests at Saclay and beam tests at CERN of the newly produced large MicroMegas chambers which will equip the New Small Wheel (NSW) of the upgraded ATLAS muon spectrometer to be installed in 2020.
- The simulation and design of a very forward muon tracker, called High Eta Tagger to be possibly installed inside the New Small Wheel after 2025 to identify muons in the pseudo-rapidity range $2.7 < \eta < 4.0$. The purpose of the simulation work is twofold: estimate the detector performance (identification efficiency and fake rates) in realistic conditions (with a very high pile-up rate of 200) and to assess the gain in physics reach for some typical channels involving muons in the forward region.
- The development and test of prototype detectors, aiming at equipping the High Eta Tagger, which could be based either on fast silicon pixel detectors (the first demonstrators have been shipped to Saclay in June 2018) or on a variant of fast MicroMegas detectors presently developed at IRFU.

The IRFU Saclay has contributed to the construction of the Muon Spectrometer and is highly involved in the both Phase 1 upgrade (for data taking starting in 2021) and Phase 2 upgrade (for the HL-LHC phase starting in 2026) programs of the ATLAS detector.

The position can start as soon as February 2019 for 2 years and is meant to be based at the IRFU institute, part of the new Paris-Saclay University near Paris, with possible travels to CERN.

Candidates should have a Ph.D. in experimental particle physics by the time of appointment. They should send by November 15, a curriculum vitae, list of publications, statement of research interests, list of scientific references, and at least two letters of recommendation.

The applications should be sent via email to Claude Guyot (claude.guyot@cea.fr).

Field of interest: hep-ex

Experiment: CERN-LHC-ATLAS

Deadline: November 15, 2018

Contact: Claude Guyot

Email: Claude.guyot@cea.fr

Letters of Reference should be sent to: claude.guyot@cea.fr